

REMARKS

Claims 33 through 55, and 57 through 65 are pending in the application, and of these, claims 33 – 52, 57, 64 and 65 are withdrawn from consideration. Claims 1 through 32 were previously canceled.

Applicants amended the specification, Table 10 for consistency with the description.

In section 2 of the Office Action, claims 53 through 55, and 58 through 63 are rejected under 35 U.S.C. 102(a) as being anticipated by International Patent Publication No. WO 99/57732 to Schultz et al. (hereinafter “the Schultz et al. publication”). Applicants respectfully traverse the rejection.

Claim 53 is an independent claim that provides for a multi-mirror system for an illumination system for lithography. The system includes, inter alia, a normal incidence mirror in an optical path from an object plane to an image plane, and a field forming optical component in the path after the normal incidence mirror for producing an arc-shaped field. The field forming optical component includes a grazing incidence mirror having negative optical power.

The Schultz et al. publication discloses grazing incidence mirrors 306 and 308 (see, for example, FIG. 24) and also grazing incidence mirrors 404 and 406 (see for example FIG. 42). Page 2 of the Office Action suggests that the Schultz et al. publication’s disclosure of grazing incidence mirrors 306, 308, 404 and 406 is descriptive of the grazing incidence mirror of claim 53. Applicants respectfully disagree.

The Office Action does not contend that the Schultz et al. publication expressly describes any of mirrors 306, 308, 404 or 406 as having negative optical power. Instead, the Office Action states that a grazing incidence mirror inherently has a negative optical power, and cites Tables 1 through 3 in support of this position.

The Schultz et al. publication has two inventors, namely Schultz and Wangler, both of whom are also inventors in the present application. Applicants submit that the Schultz et al. publication is silent with regard to the optical power of grazing incidence mirrors 306, 308, 404 and 406.

Applicants further submit that in each of Tables 1 through 3, a mirror designated as “Zerstreuspiegel” is the only mirror affirmatively described as having negative optical power. The zerstreuspiegel is the mirror nearest the light source, for example, in FIG. 24, see mirror 300, and in FIG. 42, see mirror 400. Since mirrors 300 and 400 are those **nearest the light source**, neither of mirrors 300 or 400 are situated **in an optical path after a normal incidence mirror**, as is the grazing incidence mirror of claim 53. Consequently, Tables 1 through 3 of the Schultz et al. publication do not disclose a grazing incidence mirror having negative optical power, as recited in claims 53.

Page 2 of the Office Action introduces U.S. Patent No. 6,400,794 to Schultz et al. (hereinafter “the Schultz et al. patent”), which is a continuation of the Schultz et al. publication, with an assertion that the Schultz et al. patent teaches a field forming component that includes a grazing incidence mirror that inherently has a negative optical power. In support of this position, the Office Action directs Applicants’ attention to claims 4 and 5 of the Schultz et al. patent.

Claims 4 and 5 of the Schultz et al. patent depend from claim 3, and are directed toward features of a collector unit that is introduced in claim 3. Such a collector unit is described, in part, at col. 14, lines 4 – 11, and also at col. 14, lines 37 – 44 with reference to FIG. 24. More specifically, FIG. 24 includes a collector mirror 300 (col. 14, line 39). As is clear from FIG. 24, collector mirror 300 is the mirror **closest to a light source** 200, and so, it is not situated **in an optical path after a normal incidence mirror**, as is the grazing incidence mirror of claim 53. Consequently, the mirrors in claims 4 and 5 of the Schultz et al. patent do not disclose a field forming component after a normal incidence mirror and including a grazing incidence mirror having negative optical power, as recited in claims 53.

The present application claims priority to (a) German Patent Application No. 199 35 568.1, filed July 30, 1999, (hereinafter “the ‘568 application”) and (b) German Patent Application No. 299 15 847.0, filed September 9, 1999 (hereinafter “the ‘847 application”). Concurrent with the submission of the present document, Applicants are also submitting a certified copy of the ‘568 application and the ‘847 application.

The Schultz et al. publication was published on November 11, 1999. Thus, both of the ‘568 application and the ‘847 application pre-date the Schultz et al. publication.

Applicants wish to direct the Examiner’s attention to FIG. 2A of the ‘568 application. The arrangement of components in the Schultz et al. publication, FIG. 24, and in the Schultz et al. patent, FIG. 24 are identical to that of FIG. 2A of the ‘568 application. Thus, to the extent that the Office Action relies on any of the components of the Schultz et al. publication, FIG. 24 or the Schultz et al. patent, FIG. 24 as having an “inherent” property, such property is also inherent to FIG. 2A of the ‘568 application. **Since the ‘568 application pre-dates both of the Schultz et al. publication and the Schultz et al. patent, the disclosures of the Schultz et al. publication and the Schultz et al. patent cannot serve as a basis for a rejection of the claims of the present application.**

For the several reasons provided above, Applicants respectfully submit that the Schultz et al. publication does not anticipate claim 53. Claims 54, 55 and 58 through 63 depend from claim 53. As such, the Schultz et al. publication also does not anticipate claims 54, 55 and 58 through 63. Applicants respectfully request reconsideration and withdrawal of the section 102(a) rejection of claims 53 through 55 and 58 through 63.

Section 4 of the Office Action discusses a reference, namely a paper by Antoni et al. (hereinafter “the Antoni et al. paper), that Applicants submitted with an Information Disclosure Statement, but for which Applicants failed to provide a complete publication date. With the present document, Applicants are submitting an Information Disclosure Statement, another copy of the Antoni et al. paper, and a PTO-1449 showing that the Antoni et al. paper was published on 3 AUG

2003. Applicants respectfully request that the Examiner consider, and make of record, the Antoni et al. paper.

In view of the foregoing, Applicants respectfully submit that all claims presented in this application patentably distinguish over the prior art. Accordingly, Applicants respectfully request favorable consideration and that this application be passed to allowance.

Respectfully submitted,

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